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**THE UNITED STATES PATENT AND TRADEMARK OFFICE**

**In re Application of:**

Lior BAUSSI et al

Serial No.: 10/516,926

Filed: July 14, 2005

For: DIRECTION FINDING CELL  
PHONES

Examiner: Marcos L. TORRES



Group Art Unit: 2617

Attorney Docket: 37160

Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450

**REQUEST FOR CORRECTED FILING RECEIPT**

**Sir:**

Attached hereto are copies of the Official Filing Receipt and the papers upon which the same was issued.

1. There is an omission with respect to *Domestic Priority data* field, please correct as follows:

**Domestic Priority data as claimed by applicant**

This application is a 371 of PCT/IL03/00438 05/26/2003

**which claims benefit of 60/383,594 05/29/2002**

2. There is an error with respect to *Foreign Applications* field, please correct as follows:

## Foreign Applications

~~UNITED STATES OF AMERICA 06383594 05/29/2002~~

**REMARKS**

The present application is a US National Phase of PCT Application No. PCT/IL03/00438, filed on May 26, 2003, which claims priority from US Provisional Patent Application No. 60/383,594, filed on May 29, 2002.

Applicants wish to point out that earlier US Provisional Patent Application No. 60/383,594, filed on May 29, 2002 has been omitted from the "*Domestic Priority Data*" field and should be inserted into the "*Domestic Priority Data*" field.

Applicants further wish to point out that the US Application No. 06/383,594 was originally published in the earlier PCT Application by mistake, and should have read as 60/383,594 (see PCT Application cover sheet attached). Therefore, the US Patent Application No. 06/383,594 should not appear in the "*Foreign Applications*" field as it has no relation to the present application.

Copies of a Preliminary Amendment and an *Executed* Declaration and Power of Attorney as originally filed in the present application, showing the correct earlier US Provisional Patent Application No. 60/383,594, are attached.

Issuance of a Corrected Filing Receipt to reflect the correct details as mentioned above is respectfully requested.

Respectfully submitted,



Martin D. Moynihan  
Registration No. 40,338

Date: April 30, 2008



## UNITED STATES PATENT AND TRADEMARK OFFICE

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APPL NO.	FILING OR 371 (c) DATE	ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	DRAWINGS	TOT CLMS	IND CLMS
10/516,926	07/14/2005	2681	783	340/04299	3	47	2

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CONFIRMATION NO. 8721

## FILING RECEIPT

\*OC000000016914789\*

\*OC000000016914789\*

Date Mailed: 09/07/2005

Receipt is acknowledged of this regular Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please mail to the Commissioner for Patents P.O. Box 1450 Alexandria Va 22313-1450. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).

## Applicant(s)

Lior Baussi, Netanya, ISRAEL;  
 Alon Wallach, Ramat-Gan, ISRAEL;

## Power of Attorney:

Allan Entis-52866

## Domestic Priority data as claimed by applicant

This application is a 371 of PCT/IL03/00438 05/26/2003  
 which claims benefit of 60/383,594 05/29/2002

## Foreign Applications

~~UNITED STATES OF AMERICA 06383594 05/29/2002~~

Projected Publication Date: 12/08/2005

Non-Publication Request: No

Early Publication Request: No

\*\* SMALL ENTITY \*\*

Title

Direction finding cell phones

**Preliminary Class**

455

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Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process simplifies the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4158).

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340/04299 A01



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Lior BAUSSI, et al.  
Serial Number: Not Yet Assigned  
Filed: May 26, 2003 as PCT/IL03/00438 and Herewith as  
U.S. National Stage  
Title: DIRECTION FINDING CELL PHONES  
Art Unit: Not Yet Assigned  
Examiner: Not Yet Assigned



Honorable Commissioner of Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**PRELIMINARY AMENDMENT**

Sir:

Further to the concurrent filing of the U.S. national stage of PCT Application No. PCT/IL03/00438, kindly amend the application as follows prior to examination:

**IN THE SPECIFICATION**

Kindly replace the "Related Applications" section beginning on page 1, immediately after the title with the following paragraph.

**--RELATED APPLICATIONS**

The present application is a U.S. National Application of PCT Application No. PCT/IL03/00438, filed on May 26, 2003. This application also claims the benefit under 119(e) of US Provisional application 60/383,594, filed May 29, 2002, the disclosure of which is incorporated by reference.--

**IN THE CLAIMS**

1. (Original) A direction finding system comprising:

at least one first hand holdable unit comprising circuitry that transmits a radio beacon signal; and

at least one second hand holdable unit having a display screen and comprising direction finding (DF) circuitry that receives a radio beacon (RB) signal transmitted by a first unit of the at least one first unit and determines from the received radio beacon signal an azimuth angle for the location of the first unit;

wherein the controller generates a display on the display screen responsive to the azimuth angle that indicates a location of the first unit.

2. (Original) A direction finding system according to claim 2 wherein the direction finding circuitry comprises Watson-Watts direction finding circuitry.

3. (Original) A direction finding system according to claim 2 wherein for receiving RB signals the at least one second unit comprises a first antennae and a second antenna electrically connected to the Watson-Watts direction circuitry.

4. (Original) A direction finding system according to claim 3 wherein a difference in signal attenuation between the electrical connections of the antennae to the Watson-Watts circuitry is less than about 0.3 dB.

5. (Original) A direction finding system according to claim 3 wherein a difference in signal attenuation between the electrical connections of the antennae to the Watson-Watts circuitry is less than about 0.2 dB.

6. (Original) A direction finding system according to claim 3 wherein a difference in signal attenuation between the electrical connections of the antennae to the Watson-Watts circuitry is less than about 0.1 dB.



7. (Currently Amended) A direction finding system according to ~~any of claims 3-6~~ claim 3 wherein the antennae have an electrical length less than about one fifth the wavelength of a carrier wave of the radio beacon signal.
8. (Original) A direction finding system according to claim 7 wherein the antennae have an electrical length equal to about one sixth the wavelength of the carrier wave of the radio beacon signal.
9. (Currently Amended) A direction finding system according to ~~any of claims 3-8~~ claim 3 wherein the two antennae are spaced apart by a distance less than about one fifth of the carrier wavelength.
10. (Currently Amended) A direction finding system according to claim 3 ~~any of claims 3-9~~ wherein the two antennae are spaced apart by a distance equal to about one eighth of the carrier wavelength.
11. (Currently Amended) A direction finding system according to claim 3 ~~any of claims 3-10~~ wherein the Watson-Watts circuitry determines the azimuth from a difference between amplitude and/or phase of the received RB signal at the antennae.
12. (Currently Amended) A direction finding system according to claim 2 ~~any of claims 2-11~~ wherein the at least one first unit comprises circuitry and apparatus that provides conventional cell phone telephony.
13. (Original) A direction finding system according to claim 12 wherein the at least one first unit comprises a common antenna for transmitting RB signals and for cell phone telephony functions.
14. (Original) A direction finding system according to claim 13 wherein the at least one first unit comprises a switch controllable to selectably, electrically connect the common antenna to the radio beacon circuitry or the cell phone circuitry.

15. (Currently Amended) A direction finding system according to claim 3~~any of claims 3-13~~ wherein the at least one second unit comprises circuitry and apparatus that provides conventional cell phone telephony.

16. (Original) A direction finding system according to claim 15 wherein the at least one second unit comprises a switch controllable to selectably, electrically connect the first antenna to the direction finding circuitry or the cell phone circuitry.

17. (Currently Amended) A direction finding system according to claim 12~~any of claim 12-16~~ wherein the RB signals comprise a carrier wave and the at least one first unit and the at least one second unit comprise a filter that blocks electromagnetic energy at a frequency of the carrier wave from reaching the cell phone circuitry.

18. (Original) A direction finding system according to claim 1 wherein the at least one first unit comprises circuitry and apparatus that provides conventional cell phone telephony.

19. (Currently Amended) A direction finding system according to claim 1 ~~or claim 2~~ wherein the at least one second unit comprises circuitry and apparatus that provides conventional cell phone telephony.

20. (Currently Amended) A direction finding system according to claim 1~~any of the preceeding claims~~ wherein the direction finding circuitry determines a range for the first unit of the at least one unit responsive to the received RB signal.

21. (Original) A direction finding system according to claim 20 wherein the direction finding circuitry determines a DC level of the RB signal.

22. (Original) A direction finding system according to claim 21 wherein the controller determines the range responsive to magnitude of the DC level.

23. (Currently Amended) A direction finding system according to claim 20~~any of claims 20-22~~ wherein the controller generates the display responsive to the determined range.

24. (Currently Amended) A direction finding system according to claim 1~~any of the preceding claims~~ wherein the at least one second unit comprises circuitry for transmitting signals to the at least one first unit and the at least one first unit comprises circuitry for receiving signals transmitted by the at least one second unit.

25. (Original) A direction finding system according to claim 24 wherein a second unit of the at least one second unit transmits an interrogation signal responsive to which a first unit of the at least one first unit that receives the interrogation signal transmits an RB signal.

26. (Original) A direction finding system according to claim 25 wherein subsequent to transmitting the interrogation signal the second unit transmits at least one additional interrogation signal.

27. (Original) A direction finding system according to claim 26 wherein each of the at least one additional interrogation signal is transmitted following a delay period that begins after a last RB signal received by the second unit that is transmitted by the at least one first unit responsive to the preceding interrogation signal.

28. (Currently Amended) A direction finding system according to claim 25~~any of claims 25-27~~ wherein each interrogation signal transmitted by the second unit comprises ID data specific to a user of the second unit.

29. (Original) A direction finding system according to claim 28 wherein each of the at least one first unit is programmable with preference data specific to a user of the first unit and if it receives an interrogation signal transmitted by the second unit it transmits an RB signal responsive thereto only if the ID data in the transmitted interrogation signal matches preference data with which it is programmed.

30. (Currently Amended) A direction finding system according to claim 25~~any of claims 25-29~~ wherein the transmitting circuitry of each first unit transmits its RB signal following a predetermined delay period after receipt of an interrogation signal.

31. (Original) A direction finding system according to claim 30 wherein the predetermined delay period for each first unit is chosen from plurality of different delay periods so as to reduce a probability that any two of the first units that receive a same interrogation signal have a same delay period.

32. (Currently Amended) A direction finding system according to claim 30 ~~or claim 31~~ wherein the transmitting circuitry of the first unit dithers its predetermined delay period.

33. (Currently Amended) A direction finding system according to claim 1 ~~any of the preceding claims~~ wherein each first unit is programmable so that RB signals transmitted by the first unit comprises ID data specific to a user of the first unit.

34. (Original) A direction finding system according to claim 33 wherein each unit of the at least one second unit is controllable by its user to transmit a signal comprising ID data that it receives in an RB signal from a given first unit whose location is indicated in the display, which given first unit is selectable by the user from the display.

35. (Original) A direction finding system according to claim 34 wherein the second unit is programmable with preference data specific to the second unit's user and wherein the location of a first unit is indicated on the screen only if ID data in the RB signal received from the first unit matches preference data with which it is programmed.

36. (Currently Amended) A direction finding system according to claim 1 ~~any of the preceding claims~~ wherein the display indicating a position of a first unit comprises an icon representing the first unit displayed against a background of a radar screen and wherein a location of the icon on the radar screen corresponds to a location of the first unit relative to the orientation of the second unit.

37. (Original) A direction finding system according to claim 36 wherein a first unit of the at least one first unit is programmable so that RB signals that it transmits comprises data encoding at least one visual cue characteristic of the user of the first unit.

38. (Original) A direction finding system according to claim 37 wherein the controller of the at least one second unit displays on the screen, in association with an icon representing a first unit, a visual cue of the at least one visual cue encoded in an RB signal it receives from the first unit.

39. (Currently Amended) A direction finding system according to claim 1 ~~any of the preceding claims~~ wherein the RB signals comprise a carrier wave having a frequency in a range from about 800 MHz to about 900 MHz.

40. (Currently Amended) A direction finding system according to claim 1 ~~any of the preceding claims~~ wherein a second unit of the at least one second unit has an effective maximum range less than or equal to about 200 meters for receiving an RB signal transmitted by a first unit that can be used to determine an azimuth for the first unit.

41. (Original) A direction finding system according to claim 40 wherein the maximum range is less than or equal to about 100 meters.

42. (Original) A direction finding system according to claim 41 wherein the maximum range is less than or equal to about 50 meters.

43. (Original) A communication system comprising:

a plurality of cellular phones each of which comprises a display screen a GPS receiver that determines spatial coordinates for the phone's position and a transceiver for transmitting non-telephony signals;

wherein the transceiver of a first phone of the plurality of phones is controllable to transmit an interrogation signal responsive to which the transceiver of a second phone of the plurality of phones that receives the interrogation signal transmits a signal comprising GPS coordinates of the second phone; and

if the first phone receives the signal transmitted by the second phone, it displays a position icon responsive to the GPS coordinates on the first phone's screen that indicates a location of the second phone.

44. (Original) A communication system according to claim 43 wherein each phone comprises a compass that generates signals responsive to a heading of an operator of the phone and wherein the second phone displays responsive to the compass signals, and together with the position icon, a heading icon indicating the heading of the second phone's operator.

45. (Original) A communication system according to claim 44 wherein the compass comprises a GPS compass.

46. (Currently Amended) A communication system according to claim 44 ~~or claim 45~~ wherein the compass comprises a magnetic compass.

47. (New) A direction finding system according to claim 2 wherein the at least one second unit comprises circuitry and apparatus that provides conventional cell phone telephony.

**REMARKS**

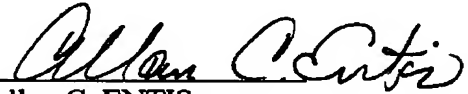
This application is submitted as a National Phase Application of PCT Application No. PCT/IL03/00438.

In the present amendment claims 7, 9-12, 15, 17, 19-20, 23-24, 28, 30, 32-33, 36, 39-40 and 46, are amended to remove multiple dependencies and new claim 47 is added. New claim 47 recites the limitation recited in claim 19 as dependent on claim 2. Changes to the amended claims are made to put them in proper form for examination in the U.S.

Applicants wish to bring to the attention of the Examiner that the amendments are based on the claims as originally filed with the PCT Application.

An action on the merits is respectfully awaited.

Respectfully submitted,  
Lior BAUSSI, et al.

  
Allan C. ENTIS,  
Reg. No. 52,866

December 1, 2004

William H. Dippert, Esq.  
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Rec'd

14 JUL 2005

Docket No.  
340704299  
10/516926

**CANCELLED**  
JUL 17 2005  
RECEIVED

## Declaration and Power of Attorney For Patent Application

### English Language Declaration

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name,

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

**DIRECTION FINDING CELL PHONES**

the specification of which

(check one)

☐ is attached hereto.

☒ was filed on May 26, 2003 as United States Application No. or PCT International Application Number PCT/IL03/00438 now USSN 10/516,926 and was amended on December 1, 2004

(if applicable)

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or (f), or 365(b) of any foreign application(s) for patent, or plant breeder's rights certificate(s), or 365(a) of any PCT International application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent, inventor's or plant breeder's rights certificate(s), or any PCT international application having a filing date before that of the application on which priority is claimed.

#### Prior Foreign Application(s)

#### Priority Claimed

(Number)	(Country)	(Day/Month/Year Filed)	<input type="checkbox"/>
(Number)	(Country)	(Day/Month/Year Filed)	<input type="checkbox"/>
(Number)	(Country)	(Day/Month/Year Filed)	<input type="checkbox"/>



(Application Serial No.)

(Filing Date)

(Application Serial No.)

(Filing Date)

(Application Serial No.)

(Filing Date)

I hereby claim the benefit under 35 U. S. C. Section 120 of any United States application(s); or Section 365(c) of any PCT International application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of 35 U.S.C. Section 112, I acknowledge the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37, C. F. R., Section 1.56 which became available between the filing date of the prior application and the national or PCT International filing date of this application:

(Application Serial No.)

(Filing Date)

(Status)  
(patented, pending, abandoned)

(Application Serial No.)

(Filing Date)

(Status)  
(patented, pending, abandoned)

(Application Serial No.)

(Filing Date)

(Status)  
(patented, pending, abandoned)

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

10 POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith. (list name and registration number)

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(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization  
International Bureau



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**WO 03/100452 A1**

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(22) International Filing Date: **26 May 2003 (26.05.2003)**

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**06/383,594** **29 May 2002 (29.05.2002)** **US**

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(72) Inventor; and

(75) Inventor/Applicant (*for US only*): **WALLACH, Alon [IL/IL]; 39 SHARET STREET, 52413 RAMAT-GAN (IL).**

(74) Agents: **FENSTER, Paul et al.; FENSTER & COMPANY, INTELLECTUAL PROPERTY 2002 LTD., P. O. BOX 10256, 49002 PETACH TIKVA (IL).**

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— *with international search report*

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*



**WO 03/100452 A1**

(54) Title: **DIRECTION FINDING CELL PHONES**

(57) Abstract: A direction finding system comprising: at least one first hand holdable unit comprising circuitry that transmits a radio beacon signal; and at least one second hand holdable unit having a display screen and comprising direction finding (DF) circuitry that receives a radio beacon (RB) signal transmitted by a first unit of the at least one first unit and determines from the received radio beacon signal an azimuth angle for the location of the first unit; wherein the controller generates a display on the display screen responsive to the azimuth angle that indicates a location of the first unit.